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Taylor et al.

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[54] **COMBINATION BOAT ANCHOR AND FENDER**

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[52] **U.S. Cl.** ..... **114/206 R,** 114/219

[51] **Int. Cl.** **B63b 21/22,** B63b 21/04

[58] **Field of Search** ..... 114/206 R, 219; 9/8 R

[56] **References Cited**

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[57] **ABSTRACT**

A combination boat anchor and fender comprising an elongated, weighted element, the latter being provided with two square ends of relatively rigid but cushioning material and a square piece intermediate said ends thereof of the same or similar material and of approximately the same dimension, the element and said ends and intermediate piece being clamped together by a central rod which is threaded at one end to receive a bolt thereon and provided with a ring or loop formation at the other end to complete the clamping means, the loop affording means of line attachment thereto for anchoring purposes.

7 Claims, 4 Drawing Figures

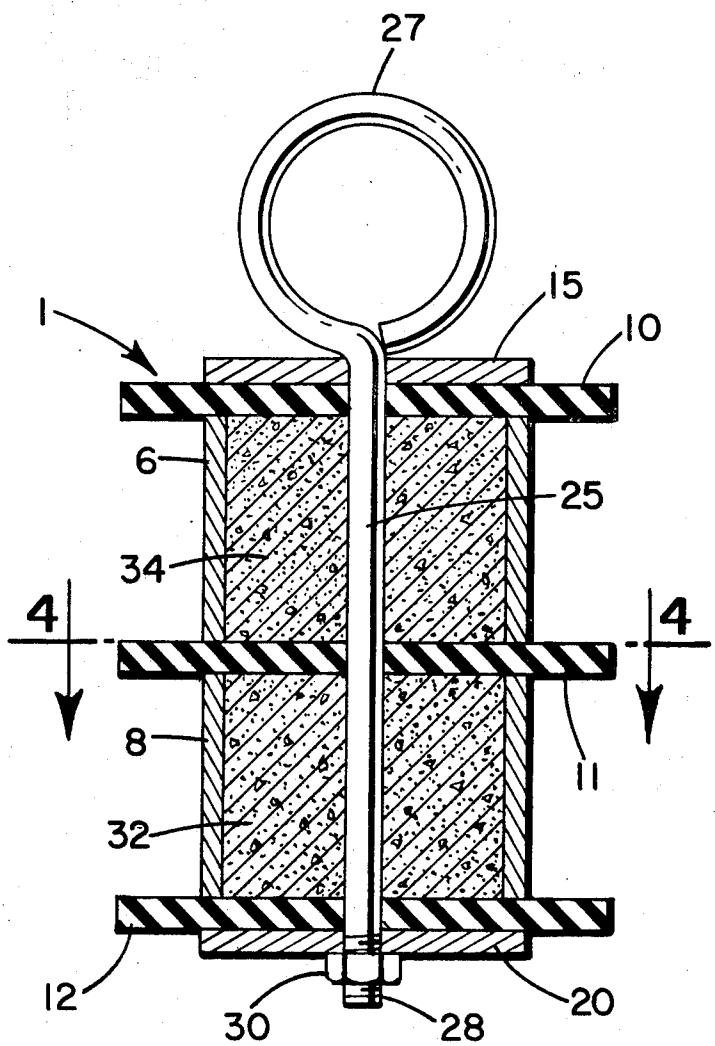


FIG. 1

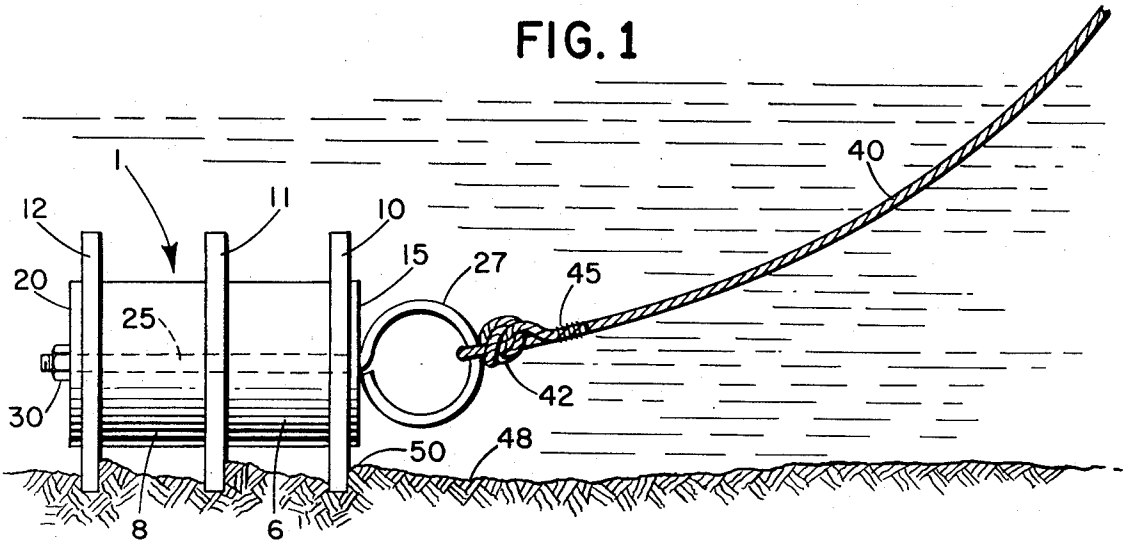


FIG. 2

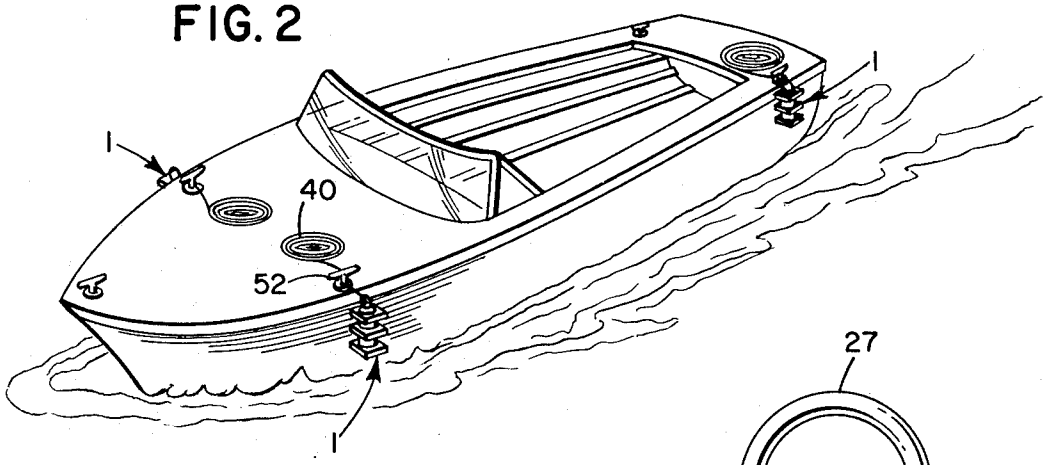


FIG. 3

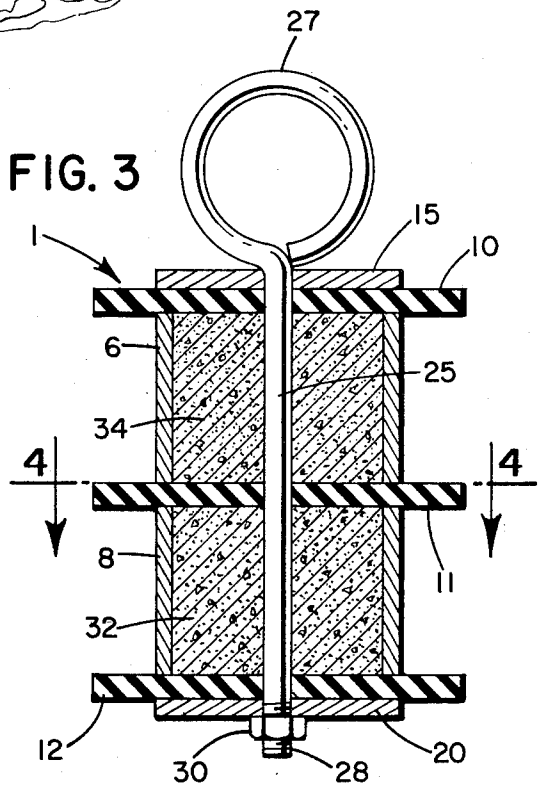
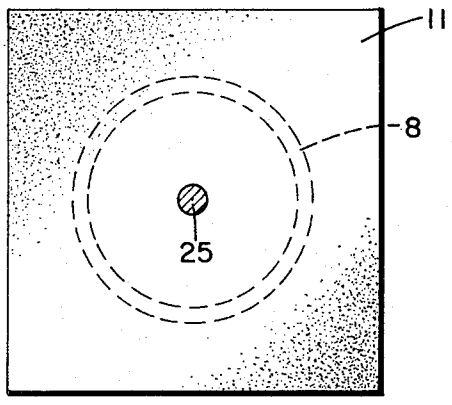


FIG. 4



COMBINATION BOAT ANCHOR AND FENDER

BACKGROUND OF THE INVENTION AND PRIOR ART

As indicated in the foregoing Abstract, this invention relates to a type of anchor that is particularly useful with regard to smaller watercraft. Of course, all of such boats are used in connection with an anchor of one type or another such as the fluke type anchor, following or otherwise, the mushroom type, etc. Heretofore, however, anchors of this type served but one useful purpose and as indicated by their very name — the anchoring of the craft at a designated location. However, in the instant case, this invention involves an anchoring device which serves a twofold purpose — not only does it adequately perform as an anchor but furthermore when suspended over the side near the gunnel of the boat, the configuration of the anchor is such as to permit of its use as a boat fender, bumper or buffer, permitting the boat to be tied up against the wharf or adjacent to or in contact with another boat with this type of fender being, in the latter aspect, now in a position to protect the hulls of both boats.

As stated, anchors of the mushroom type are commonly used. The rather ancient U.S. Pat. No. 792,869 illustrates one form of these, this patent being relevant only in its disclosure of such a mushroom type of anchor being used in conjunction with a rectangular stock at one end perhaps to permit embedment more effectively in the ocean bottom. As typical of other prior art devices, however, such mushroom type anchor can be used for no other purpose but just that. It would lack any utility whatsoever as a device that can be alternatively used as a boat fender when positioned, as indicated in the foregoing, over the side and against the hull of the boat.

The idea of using some form of rectangular base has also been contemplated by others in the past as, for example, the device described in U.S. Pat. No. 2,556,279. But here again, the rectangular base there shown is used in conjunction with an entirely different arrangement which would render that form of anchor completely non-functional as a device that could be used alternatively as a boat fender or bumper.

In the instant case, our invention includes use of a heavy weight which, in its preferred form, is configured to approximate an elongated cylinder. At each end of this cylinder is provided a square or rectangular element of a size or dimension substantially in excess of the diameter of such cylinder so that the edges of each rectangular or square piece go through substantially beyond the circumference of the weighted center element. This form of the device, with but two squares or rectangular elements on each end, can perform as an anchor and also perhaps under certain circumstances be effectively used as a boat fender. However, in the preferred form of our invention and as herein described in more detail, an additional square or rectangular configuration of approximately the same dimension as the two end pieces is positioned intermediate these end pieces. With three of such squares aligned so that the edges of each lie in the same plane, the device not only serves its primary function as an anchor but is more suitably adaptable for use as a fender when suspended over the side of the craft since the intermediate square in conjunction with the two end pieces affords additional contacting surface with either an adjacent boat or the usual wharf against which the craft is secured.

These rectangular or square end pieces as generally described above naturally provide an additional function — when laid upon the side on the deck of the boat the anchor-fender device will stay in position despite the pitch or roll of the craft when underway.

Since, as indicated, the prior art does not disclose any device relating to the twofold purposes of our invention, it is presented here as encompassing a novel concept, although the device itself is of the simplest sort. Furthermore, an inherent advantage of the unit is found in the fact it may be produced in mass quantity at lowest possible cost, this because substantially all, if not all, of the materials used in fabrication can be waste products or materials. For example, the square pieces fitted at each end as well as the intermediate piece of similar configuration may be made of used belting, old tires, used rubber, other types of elastomeric materials, etc., the only requisite being that such square be of a material of some rigidity yet having a somewhat cushion type of surface or a non-abrasive surface such that contact with another surface will not tend to scratch, dent or impair the latter. Similarly, other water durable type of materials such as resins of the polyethylene type may be useful in this regard. Also, the weighted center piece can be made of scrap metal, enclosed in a cylinder, but here, and as described below, is preferably of the form where the elongated tubular member is filled with poured concrete provided or formed with a central bore to receive the rod member therethrough.

OBJECTS OF THE INVENTION

It is accordingly a primary object of the invention to provide a combination device, i.e, an anchor means for particularly small craft, that does not only function as an effective anchor, but also is so designed and constructed that it performs an additional function — that of enabling use as a boat fender or a bumper permitting tie up with an adjacent boat or tie up of the craft against the usual type of wharf.

A further object of the invention is the provision of a device of the nature described wherein a central, elongated weighted element is provided with, in the preferred embodiment, at least three rectangular or square pieces of cushioning material, the center piece thereof being evenly spaced from the other two pieces positioned at either end of the weighted center column. These flat, square elements facilitate use of the device as an anchor for combined with the weight to which they are attached, such pieces tend to dig into the ocean bottom a substantial depth with a build up of silt, sand, etc., against the sides of such elements, thus to resist a strain on the line to which the anchor is attached.

An additional object of the invention is the provision of a device of the nature briefly referred to in the foregoing which can be fabricated easily, at extremely low cost because of the use of scrap material, and accordingly be marketed to small boat owners at minimal expense.

Finally, it is our objective to provide a device having these dual functions so mentioned which departs from the normal schemes of anchor design and thus introduces a novel concept revolving about a means exhibiting a double utility, effective for both purposes.

DESCRIPTION OF DRAWINGS

The appended drawings depict not only the manner of construction of the device of our invention but also graphically illustrate the use thereof in the two ways which have been above mentioned. Referring more particularly thereto:

FIG. 1 illustrates the device of the invention as being used for one of its two functions — that of an anchor, the anchor here pictured resting upon the ocean floor with the strain upon the securing line causing build up against each of these rectangular plates or flukes thus to more effectively resist such strain on the line;

FIG. 2 graphically illustrates the other use of the device where two of such anchor means are shown as suspended over the boat side and against the upper hull of a relatively small boat, thus to effectuate the other use of the invention, that of a boat fender or bumper;

FIG. 3 is a vertical, cross-sectional view of the invention as same is shown in FIG. 1, but here showing the manner of construction of the device, and as such will be described in more detail below; and

FIG. 4 is a sectional view taken on the line 4—4 of Flg. 3.

MORE DETAILED DESCRIPTION OF THE INVENTION

Since FIGS. 1 and 2 are primarily directed to exposition of the usages of the device of this invention, FIGS. 3 and 4 will be here more particularly referred to, the latter illustrating the component parts of the assembly and the manner of securing same together.

The entire device is generally indicated at 1. The elongated (as here shown, tubular) weighted element is depicted as consisting of two tubular casings 6 and 8, these being separated by the intermediate rectangular element 11. At each end of the respective casings 6 and 8 are affixed like rectangular members 10 and 12, these being of a dimension approximately the same as the intermediate member 11. The elements thus far described are secured together in the following fashion:

A flange or plate is positioned exterior to and in contact with each of the end rectangular elements 10 and 12. The top flange (viewing FIG. 3) is shown at 15 and the bottom at 20. A rod element 25 is axially positioned through the elongated tubular structure or weighted member of the device, appropriate bores being provided in each of the rectangular elements 10, 11 and 12 as well as the opposed securing flanges 15 and 20. At one end, the upper end, this rod 25 terminates in a circular or ring configuration 27, the latter, of course, affording the means by which a securing line is attached thereto. At the opposite end of rod element 24, the same is threaded as at 28 to receive a bolt means 30. Upon tightening of the latter, it is apparent that the ring arrangement 27 is brought to bear against the upper flange or plate 15 with the bolt 30 in turn forcing the lower plate 20 against the lower rectangular member 12. Thus, all components as thus far described are secured in fixed position in that relationship to each other as shown in FIG. 3.

This described elongated, weighted element may, of course, take different forms. For example, it can consist, and having reference to tubular portions 6 and 8, of simply a heavy casting which is lead filled, a solid lead casting, windings of heavy wire filling the spaces indicated by the collars 6 and 8, etc. It may be of a cross-sectional configuration different from that shown, i.e., circular.

However, in the instant preferred embodiment of the invention and as characterized by its representation found in FIG. 3, these two collars or tube portions 6 and 8, preferably made of metal of sufficient thickness to afford strength and rigidity to the assembly, are concrete filled as indicated with regard to the lower tube 8 at 32, and with regard to tubular element 6, the concrete being indicated at 34.

Where concrete is so utilized as the substance lending weight to the structure, then the manner of fabrication becomes quite simple. For example, each of the tubular casings 6 and 8 can be separately filled with concrete with a central bore therein of sufficient diameter to match the diameter of the rod 25. Upon curing of the concrete within each of these casings the same are oriented in their respective positions as shown in FIG. 3. In this regard the rod is inserted first through washer 15 then top rectangular element 10, through the bore in concrete 34, through the appropriate aperture in intermediate element 11, through the central aperture in end element 12, and through the opening in bottom washer or flange 20. With take up of the bolt 30, the same compresses the two end plates 15 and 20 together with the result that the entire series of these members of the combination are fixed in secure position and in the relationship as shown in FIG. 3.

Of course, casings 6 and 8 can be substituted by solid castings of lead or other metal, again each with a bore therethrough to accept the rod 25. Alternatively, windings of heavy wire around the rod and intermediate the square elements 10 and 11 on the one hand, and the elements 11 and 12 on the other, will perform the same function. Other obvious alternates may be apparent to those skilled in the art, but still with retention of the basic scheme of this particular advance in the art.

The use of the device of the invention as an anchor and as indicated above is illustrated in FIG. 1. The eye or ring member 27 permits attachment of line 40 leading to the watercraft. Such line is secured to the ring 27 via a usual knot such as a bowline 42, the end of the line in customary fashion being laced via 45 to the line 40. As is depicted in FIG. 1, aside from the weight of the main body of the device, strain upon line 40 tends to force each of the rectangular elements 10, 11 and 12 into the sea bed 48. Consequent upon this, a build up of sand, silt, etc., and as shown at 50, forms against the face of each of these elements and on the side toward the attached line, thus to maintain the anchor in firmer position than it would be if simply a deadweight, without else, were utilized.

FIG. 2 illustrates the use of the device 1 on the port side of the watercraft. With the lead line 40 faked down on the deck as shown, said line is fixed to the deck via the usual cleat 52, with sufficient length of line extending from such cleat to permit each of the anchors indicated at 1 to hang down from the deck over the side of the boat, against the upper hull, and as shown in this FIG. 2. The device is now in a position to act as a buffer or fender for the purposes stated — positioning the boat in contact or with an adjacent craft, or docking the boat in permanent fashion against the usual dock or wharf.

With this description of the invention, it is to be appreciated, as stated in the foregoing, that despite the

simplicity of the involved combination the same nevertheless results in a twofold function of great utility to small boat owners. Equally significant, and as further indicated above, the unit is extremely simple to manufacture, can be made at minimal cost and purchased by the small boat owner at minimum expense.

Although other alternates and substitutes may be made without departing from the spirit of the invention, it is to be understood that the scope thereof is to be measured only by the limitations of the several claims appended hereto.

We claim:

1. A combination boat anchor and fender device for watercraft comprising an elongated central core member of heavy material, said core member having two end elements of rectangular configuration, an intermediate element of like configuration between said two end elements, the perimeter of each of said elements extending substantially beyond the perimeter of the core member, each of said end and intermediate elements being of a material of sufficient rigidity to perform as an ocean bottom engaging means and as a non-scratching, non-damaging surface contacting media, whereby said device is adapted to perform the functions of both boat anchor and boat fender means.

2. The invention as defined in claim **1** wherein said elongated central core element comprises a tubular element.

3. The invention as defined in claim **1** wherein said end and intermediate elements consist of a material taken from the group of elastomeric compositions and polyethylene resins.

4. The invention as defined in claim **1** wherein a rod is axially positioned within said central core element, one end of said rod having take-up means, the other end thereof having a line receiving ring member, the end and intermediate elements being maintained in position with respect to said tubular element between said ring member and said take-up means.

5. The invention as defined in claim **4** wherein said central core element comprises a metallic casing filled with concrete, said concrete and said end and intermediate elements being provided with bores of a diameter sufficient to receive said rod therethrough.

6. The invention as defined in claim **5** wherein a bushing element is provided between said ring member and its adjacent end element and said take-up means and its adjacent end element.

7. The invention as defined in claim **6** wherein said take-up means comprises a bolt on said one end of said rod.

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